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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/567,162

03/14/2006

Katsushige Marui

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KENYON & KENYON LLP
1500 K STREET N.W.
SUITE 700
WASHINGTON, DC 20005

EXAMINER

MENON, KRISHNAN S

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/13/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/567,162	Applicant(s) MARUI ET AL.	
	Examiner Krishnan S. Menon	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

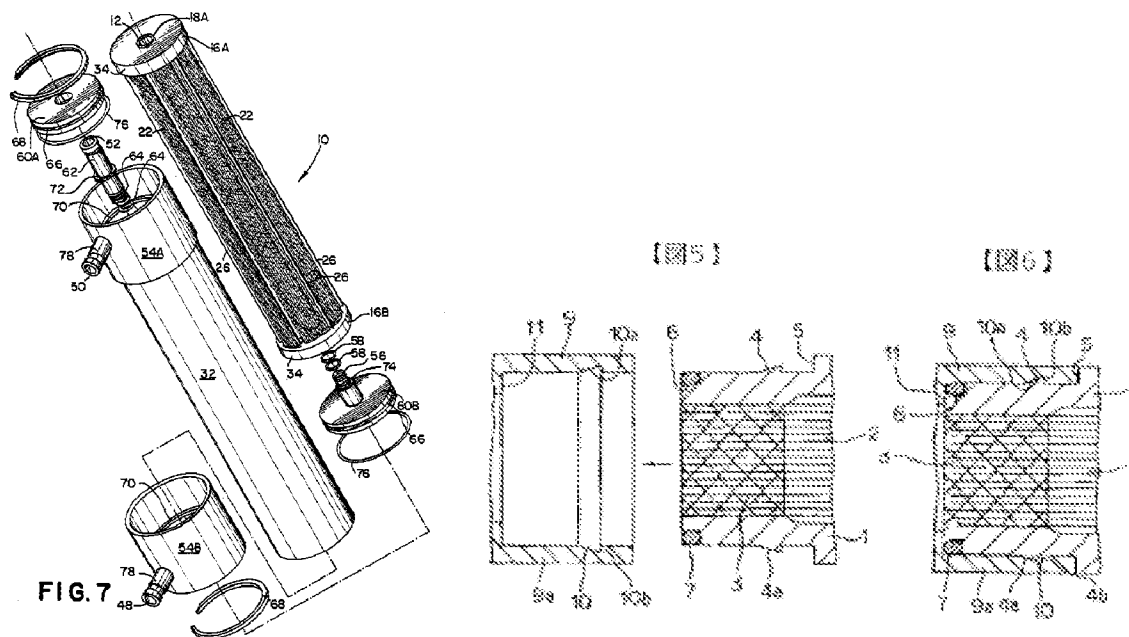
DETAILED ACTION

Claims 1-6 are pending as amended 2/17/09

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of de Winter (US 6,183,639) and/or JP 2002-292213 and/or Eckman (US 5, 470,469) and/or Collins et al (US 2002/0053540), and further in view of Nelle (US 5,018,238) or Hawkins et al (US 2003/0226798).

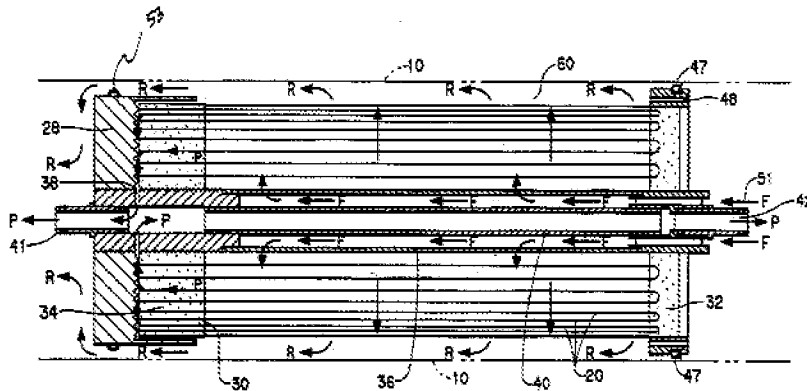
De Winter teaches a hollow fiber element having feed inlet and outlet, a central perforated tube, and feed and concentrate headers enclosed with snap rings (68) - see the figures, particularly fig 7. The teaching of this reference differs from the claims in the central tube being the permeate tube, and not the feed tube as claimed. However, such reversal of function of the parts is common in the art, as evidenced by Eckman, wherein the feed is through a central perforated tube.

U.S. Patent Feb. 6, 2001 Sheet 4 of 5 US 6,183,639 B1



JP 2002-292213 teaches a permeate chamber which is snap-fitted on the open end of the hollow fibers – see the abstract and the figures, particularly, figs 5 and 6 shown above.

Collins teaches a hollow fiber cartridge design wherein the header chamber (22) (see fig 1) is attached to the housing with a snap fit. See paragraph 31. Collins teaches a hemodialysis membrane cartridge, which has fluids flowing in both the lumen side and the shell side, and does not teach the central feed tube. However, the central feed tube is well known in the art as taught by Eckman (see fig below).



The inventive idea claimed is the “snap fit” of the chamber on to the tube-sheet of the hollow fibers to form a collection chamber for permeate. Such an attachment is well known and made obvious by the teachings of these references, and one would use snap fit for such attachment for convenience as taught by Collins.

Regarding the material of the snap, it is made of plastic or resin in Collins. According to de Winters, any suitable material can be used. De Winter teaches: “However, those of skill in the art, will appreciate from this disclosure that various materials can be used to form the outer housing 32 and associated components including steel, plastics, alloys, and multi-layered materials such as laminates, depending on the particular liquid being filtered by the filter module 10 and the environment in which the filter module 10 is operated.”

Regarding the mechanical properties of the material such as tensile and impact strength, again, one of ordinary skill in the art would be capable of selecting the right material for the part.

Eckman teaches reverse osmosis, and multiple cartridges in a housing as in claim 6. It would be obvious to one of ordinary skill in the art to combine the teachings

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of these references to arrive at applicant's invention, and the results of such combinations are predictable.

Regarding the snap engagement of the filter to the end cap, using snap-latches is well known in the art as shown by the references Nelle or Hawkins. It is also common in automobile air filters, etc. One of ordinary skill in the art would use such snap connectors for quick-connecting convenience. Regarding the "snaps" being removable, making removable is not a patentable limitation compared to the attached snaps of the references. In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961) (The claimed structure, a lipstick holder with a removable cap, was fully met by the prior art except that in the prior art the cap is "press fitted" and therefore not manually removable. The court held that "if it were considered desirable for any reason to obtain access to the end of [the prior art's] holder to which the cap is applied, it would be obvious to make the cap removable for that purpose.").

Response to Arguments

Applicant's arguments filed 2/17/09 have been fully considered but they are not persuasive. Arguments addressed in the rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S. Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Krishnan S Menon/
Primary Examiner, Art Unit 1797